

Vasquez Boulevard/I-70 Super Fund Site  
**Operating Unit 1**  
Review and Assessment

Presentation to **VB/I-70 Community Advisory Group**  
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## Vasquez Boulevard/I-70 Superfund Site – **OU1**

- My assessment is based primarily upon a review and study of the following documents:
  - VB/I-70 Remedial Investigation of OU1 (2001)
  - VB/I-70 Human Health Risk Assessment for OU1(2001)
  - VB/I-70 Record of Decision for OU1 (2003)

# Vasquez Boulevard/I-70 Superfund Site – **OU1**

- The VB/I-70 Superfund Site encompasses about 4.5 square mile in north Denver
- Within that 4.5 square miles lie the facility sites of three smelters; the former Omaha and Grant Smelter (OU 2), the former Argo Smelter (OU 3) and the former Swansea Smelter (not now an OU).
- The bulk of that 4.5 square miles encloses OU1, surface soils of residences, parks and school yards the neighborhoods of Elyria, Swansea, Cole, and Clayton and part of Curtis Park east of the South Platte River and part of the neighborhood of Globeville west of the South Platte River.

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- The VB/I-70 Superfund Site is also designated an Environmental Justice Site.
- The Environmental Justice designation is based upon
  - The residents are predominantly low income and minority.
  - The Site is disproportionately affected by environmental impacts from many sources, including
    - Industry,
    - other Superfund site, and
    - major transportation corridors.

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- Investigation of metals contamination in Elyria and Swansea began well before VB/I-70 Superfund site was proposed or added to the National Priorities List in 1999.
- As part of CDPHE investigation of air-fall from smokestack emissions from the ASARKO Globe Smelter west of the South Platte River, samples were taken in Elyria, east of the South Platte River.
- Among the 25 samples taken from shallow soils, some showed very high arsenic and lead.
- In late 1997 CDPHE asked USEPA to investigate extent of contamination

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- USEPA expanded upon CDPHE by mobilizing an Emergency Response team and sampling under the North Denver Residential Soils project.
- USEPA, under the North Denver Residential Soils project, established metals contamination levels that required time-critical removal action.
- USEPA, during the North Denver Residential Soils project established that many residential properties demonstrated metals contamination high enough to endanger some individuals, if subject to chronic exposure to backyard soils.
- USEPA proposed the VB/I-70 Superfund Site as a vehicle to perform non-time-critical remedial action for soils in the neighborhoods, under OU1.

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- Investigations of both the North Denver Residential Soils project and VB/I-70 OU1 accepted the premise of the initial CDPHE sampling; *i.e.*, metals in yards east of the river were due to air-fall of smelter stack emissions.
- Investigations of both the North Denver Residential Soils project and VB/I-70 OU1 precluded investigating any other sources of metals contamination.
- Investigations of both North Denver Residential Soils project and VB/I-70 OU1 precluded identifying any contamination of any media except shallow residential soils.
- Investigations of both precluded identifying any contamination from other industries, other Superfund sites, or major transportation corridors acknowledged to exist in the Environmental Justice site.

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- The remedy for VB/I-70 Site OU1 is appropriate IF the source of the residential soils contamination is air-fall of smelter stack emissions.
- The termination of OU1 based upon the successful implementation of the remedy for OU1 is appropriate IF the source of the metals contamination of the residential soils is air-fall of smelter stack emissions.
- The OU1 Remedial Investigation, based upon detailed and extensive assessment, concluded that air-fall of smelter stack emissions is NOT consistent with contaminant distribution in OU1, and the source is unknown.

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- The bulk of the area of OU1 lies within the historic fill area of the valley of Montclair Creek.
- The distribution pattern of metals contamination at the surface in yards is indicative of small local sources of random distribution
- This pattern is consistent with fill practices through early decades; random placement of loads of fill, some contaminated and some not.
- Sources of arsenic and lead may be smelter slag. Sources may include other materials; tannery wastes, off-spec raw ore, and mine tailings, as examples.
- Multiple mechanism readily exist to bring buried contaminants to the surface; *e.g.*, bio-uptake by plants, excavation by animals (especially worms and ants), and anthropogenic excavation of urban development (basements, utility lines, *e.g.*).
- Irrigation of residential properties with underlying groundwater.

## Vasquez Boulevard/I-70 Superfund Site – **OU1**

- I recommend the CAG review this assessment, ask questions as they arise and, potentially advise EPA to
  - Recognize the blinders limiting the RI and remedy for OU1
  - Re-open the investigation of the source(s) of contamination documented in the shallow VB/I-70 Site soils
  - Expand the assessment of contamination in all media over all areas of the VB/I-70 Site, either by redefining OU1 or establishing a new OU.
  - Honor the Environmental Justice designation by using Superfund and the VB/I-70 Site designation to investigate the disproportionate environmental impacts from all sources, including industry, other Superfund sites, and major transportation corridors.